

EM-RFO--KHLL-NONPUOPS1-2002-0005 FINAL

Non-Plutonium Operations Area I
(Name of Facility)

Balance-of-Plant
(Facility Function)

Rocky Flats Env. Technology Site Kaiser-Hill Company, L.L.C.
(Site) (Contractor)

Name: Jerry Anderson
Title: Facility Manager **Telephone No.:** (303) 966-6438
(Facility Manager/Designee)

Name: POPPELL, FRANK S
Title: RISS ESH AND Q OSE **Telephone No.:** (303) 966-6209
(Originator/Transmitter)

Name: S.L. Cunningham **Date:** 11/21/2002
(Authorized Classifier (AC))

1. Occurrence Report Number: EM-RFO--KHLL-NONPUOPS1-2002-0005

Improper Respiratory Protection in Beryllium Area

2. Report Type and Date: FINAL

Date Time
Notification: 10/16/2002 17:04 (MTZ)
Initial Update: 11/21/2002 17:25 (MTZ)
Latest Update: 11/21/2002 17:25 (MTZ)
Final: 12/02/2002 16:41 (MTZ)

3. Occurrence Category: Off-Normal

4. Number of Occurrences: 1 **Original OR:**

5. Division or Project: Kaiser-Hill Company, L.L.C.

6. Secretarial Office: EM - Environmental Management

7. System, Bldg., or Equipment: Building 865

8. UCNI?: No

9. Plant Area: RISS

10. Date and Time Discovered: 10/15/2002 15:00 (MTZ)

11. Date and Time Categorized: 10/15/2002 15:20 (MTZ)

12. DOE HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

13. Other Notifications:

Date	Time	Person Notified	Organization
10/15/2002	15:24 (MTZ)	Deanna McCranie	DOE/RFFO

14. Subject or Title of Occurrence:

Improper Respiratory Protection in Beryllium Area

15. Nature of Occurrence:

01) Facility Condition
F. Violation/Inadequate Procedures

16. Description of Occurrence:

On October 15, 2002, a subcontract D&D employee had been working in the high bay area of Building 865 for approximately two and a half hours when a Radiological Control Technician (RCT) noticed that his full-face respirator did not have filter cartridges installed. This work was being performed in a designated Beryllium Regulated Area and Contamination Area with postings requiring respiratory protection due to existing beryllium levels.

This occurrence was initially reported as Internally Reportable; however, it was upgraded to Off-Normal after the fact finding meeting and further management evaluation.

17. Operating Conditions of Facility at Time of Occurrence:

Not Applicable

18. Activity Category:

11 - Facility Decontamination/Decommissioning

19. Immediate Actions Taken and Results:

The D&D worker immediately left the area. Smears of his respirator were taken and sent off for expedited analysis, as well as a co-worker's lapel air pump sample. A fact finding meeting was scheduled.

20. Direct Cause:

- 3) Personnel Error
- A. Inattention to Detail

21. Contributing Cause(s):

22. Root Cause:

- 3) Personnel Error
- A. Inattention to Detail

23. Description of Cause:

The direct and root cause of this event was determined to be the D&D worker's inattention to detail while donning personnel protective equipment (PPE) to enter a beryllium-regulated area. He obtained and cleaned the respirator but failed to install the filter cartridges and perform a pre-use check. The worker contributed this failure to a longer than normal safety meeting causing him to rush his entry into the work area. Workers on this project are responsible for putting the filters on their respirators before wearing them, in addition to performing a pre-use check that includes a positive-negative pressure check. Had he performed a thorough pre-use check or the positive-negative pressure test, the missing filters would have been discovered before he was potentially exposed to beryllium. This inattention to detail also applies to management in the work area and several co-workers with whom he came in contact during the two and a half hours he worked in the area before the RCT noticed the missing filter cartridges.

24. Evaluation (by Facility Manager/Designee):

This occurrence did not have any adverse affects on other site or any Building 865 safety systems. Upon the discovery of this event, the D&D subcontract management appropriately initiated a safety pause to review the event with the entire crew and implement corrective actions to prevent reoccurrence. Of particular concern is the fact that over a two and a half hour period, the worker came in contact with 10-12 people, including supervision, oversight and co-workers, none of whom noticed the missing filter cartridges. Furthermore, the buddy system failed - his own co-worker never noticed that he had not installed the filter cartridges on his respirator. Appropriate corrective actions have been taken to address this issue.

All radiological and beryllium sample results of the smears taken indicated less than detectable levels. The co-worker's personal air pump sample is considered representative of the possible exposure to which the unprotected worker was potentially exposed. A Potential Intake (PI) kit was not administered since the area was posted only for beryllium concerns.

25. Is Further Evaluation Required?: No

26. Corrective Actions (* = Date added/revised since final report was approved.)

1. Safety Pause Briefing performed with all hands covering buddy system, RCT oversight, positive/negative pressure check, and PPE donning procedures.

Responsibility: Steve Clegg (ECC)

Target Completion Date: 10/16/2002 **Completion Date:** 10/16/2002

2. Install additional mirrors near the RBA boundary to aid in donning protective clothing and equipment.

Responsibility: Steve Clegg (ECC)

Target Completion Date: 10/21/2002 **Completion Date:** 10/21/2002

3. Relocate new cartridges nearer to the respirator storage bins.

Responsibility: Steve Clegg (ECC)

Target Completion Date: 10/16/2002 **Completion Date:** 10/16/2002

4. Revise donning procedure posting to require performing leak checks.

Responsibility: Steve Clegg (ECC)

Target Completion Date: 11/21/2002 **Completion Date:** 11/21/2002

5. Install a Donning posting at the final check mirror at the RBA boundary.

Responsibility: Steve Clegg (ECC)

Target Completion Date: 10/16/2002 **Completion Date:** 10/16/2002

6. ECC will brief BSI on new IH/RCT duties in PPE verification check prior to entry into CA.

Responsibility: Steve Clegg (ECC)

Target Completion Date: 10/15/2002 **Completion Date:** 10/15/2002

7. Establish PPE verification check for all employees prior to entering CA.

Responsibility: Steve Clegg (ECC)

Target Completion Date: 10/16/2002 **Completion Date:** 10/16/2002

8. Transition ECC to the Site-Wide Respirator Program.
Responsibility: Mark Lesinski
Target Completion Date: 12/17/2002 **Completion Date:** 12/17/2002

27. Impact on Environment, Safety and Health:

There is no impact on the health and safety of the workers, the public, the environment, quality or security as a result of this occurrence.

28. Programmatic Impact:

The D&D subcontract management appropriately initiated a Safety Pause to review the event with the entire crew and implement corrective actions to prevent reoccurrence.

29. Impact on Codes and Standards:

There is no impact to codes and standards as a result of this occurrence.

30. Lessons Learned:

Although we should always look out for each other, the bottom line is that each one of us is responsible for our own individual safety. Protect yourself and your co-workers by thoroughly checking every piece of protective gear before you rely on it. Always perform a pre-use check, regardless of the type of respirator being worn, and always perform a positive and negative pressure test to ensure you have a proper mask fit and seal.

31. Similar Occurrence Report Numbers:

None

32. User-defined Field #1:

020440 ISM=GP3-CF4

33. User-defined Field #2:

34. HQ Keyword(s):

01J--Conduct of Operations - Operations Procedure 08D--OSHA/Industrial Hygiene Issues - Industrial Hygiene Exposure 08K--OSHA/Industrial Hygiene Issues - Safety Compliance (Start Feb 99) 11J--Other - Subcontractor (Start July 96) 12J--EH Categories - OS/IH

35. HQ Summary:

36. DOE Facility Representative Input:

37. DOE Program Manager Input:

38. Approvals:

Approved by: Jerry Anderson, Facility Manager/Designee
Date: 11/21/2002
Telephone No.: (303) 966-6438

Approved by: MCCRANIE, DEANNA C, Facility
Representative/Designee
Date: 12/02/2002
Telephone No.:

Approved by: Approval delegated to FR, Program
Manager/Designee
Date: 12/02/2002
Telephone No.: